

**Algebra 1**  
**Practice Chapter 8 Test**

NAME \_\_\_\_\_

KEY

Write the letter for the BEST answer. (3 Points each)

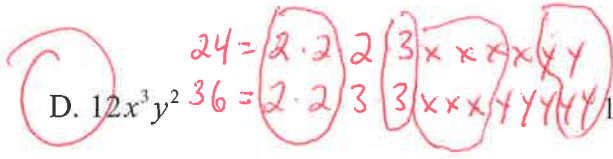
1. Factor the monomial  $24x^3y^2$  completely.

- A.  $2 \cdot 2 \cdot 6 \cdot x \cdot x \cdot x \cdot y \cdot y$       B.  $2 \cdot 2 \cdot 6 \cdot 6 \cdot x \cdot x \cdot x \cdot y \cdot y$   
 C.  $2 \cdot 2 \cdot 2 \cdot 3 \cdot x \cdot x \cdot x \cdot y \cdot y$       D.  $4 \cdot 6 \cdot x \cdot x \cdot x \cdot y \cdot y$



2. Find the GCF of  $24x^4y^2$  and  $36x^3y^5$ .

- A.  $6x^4y^5$       B.  $12x^4y^5$       C.  $6x^3y^2$       D.  $12x^3y^2$

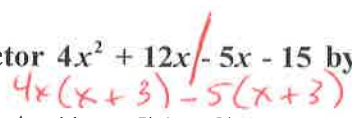


3. Factor  $3x^2 - 12x + 9$  by GCF.

- A.  $3(x^2 - 4x + 3)$       B.  $3(x^2 - 9x + 3)$   
 C.  $3(x^2 + 4x + 3)$       D.  $3(x^2 + 9x + 3)$

4. Factor  $4x^2 + 12x - 5x - 15$  by Grouping.

- A.  $(4x + 5)(x - 3)$       B.  $(4x - 5)(x + 3)$   
 C.  $(4x - 3)(x + 5)$       D.  $(4x + 3)(x - 5)$



5. Factor  $x^2 - 12x + 36$  by Perfect Square Trinomial.

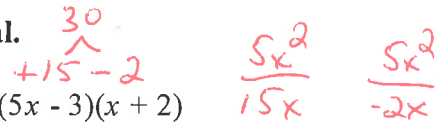
- A.  $(x - 18)^2$       B.  $(x - 6)^2$   
 C.  $(x - 6)(x + 6)$       D.  $(x + 6)^2$

6. Factor  $x^2 - 10x + 24$  by General Trinomial.

- A.  $(x - 4)(x - 6)$       B.  $(x - 2)(x + 12)$   
 C.  $(x - 6)(x + 4)$       D.  $(x - 12)(x + 2)$

7. Factor  $5x^2 + 13x - 6$  by General Trinomial.

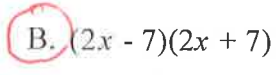
- A.  $(5x - 2)(x + 3)$       B.  $(5x - 3)(x + 2)$   
 C.  $(5x + 2)(x - 3)$       D.  $(5x + 3)(x - 2)$



Points(24) \_\_\_\_\_

8. Factor  $4x^2 - 49$  by Difference of Two Squares.

- A.  $(2x - 7)^2$       B.  $(2x - 7)(2x + 7)$   
 C.  $(4x + 7)(4x - 7)$       D.  $(4x + 7x)(4x - 7x)$



9. Factor  $3x^2 + 9x - 5$ .

A.  $(2x + 1)(x - 5)$

C.  $(2x + 5)(x - 1)$

$\frac{2x^2}{10x} - \frac{2x^2}{-1x}$

$+10-1$

B.  $(2x - 1)(x + 5)$

D.  $(2x - 5)(x + 1)$

10. Factor  $2x^2 - 2x - 24$ .

A.  $2(x + 3)(x - 4)$

C.  $2(x - 3)(x + 4)$

$2(x^2 - x - 12)$

B.  $(x + 3)(x - 4)$

D.  $(x - 3)(x + 4)$

11. Factor  $3x^2 - 48$ .

A.  $(3x + 4)(3x - 4)$

C.  $(3x + 4)(x - 4)$

$3(x^2 - 16)$

B.  $3(x - 4)(x + 4)$

D.  $3(x - 4)^2$

12. Factor  $4x^2 + 12x + 9$ .

A.  $(2x + 3)^2$

C.  $(2x + 3)(2x - 3)$

$\frac{4x^2}{6x} \frac{4x^2}{6x}$

B.  $(2x - 3)^2$

D. *prime*

13. Factor  $2x^2 - 14x + 24$ .

A.  $(x - 3)(x - 4)$

C.  $(2x - 6)(x - 8)$

$2(x^2 - 7x + 12)$

B.  $2(x + 3)(x + 4)$

D.  $2(x - 3)(x - 4)$

14. Factor  $4x^2 + 11x - 6$ .

A.  $(4x + 3)(x - 2)$

C.  $(4x + 3)(x + 2)$

$\frac{4x^2}{4x} \frac{4x^2}{4x}$

B.  $(4x - 3)(x + 2)$

D. *prime*

15. Factor  $x^2 - 11x + 28$ .

A.  $(x - 4)(x - 7)$

C.  $(x + 4)(x + 7)$

B.  $(x - 2)(x - 14)$

D. *prime*

16. Factor  $4x^2 - 12x + 3x - 9$ .

A.  $(4x + 3)(x - 3)$

C.  $(4x)(x + 3)$

$4x(x - 3) + 3(x - 3)$

B.  $(4x - 3)(x + 3)$

D.  $(4x)(x - 3)$

9. \_\_\_\_\_

10. \_\_\_\_\_

11. \_\_\_\_\_

12. \_\_\_\_\_

13. \_\_\_\_\_

14. \_\_\_\_\_

15. \_\_\_\_\_

16. \_\_\_\_\_

Points(24) \_\_\_\_\_

17. Factor  $18x^2 - 50$ .  $2(9x^2 - 25)$
- A.  $2(3x - 5)^2$       B.  $2(3x + 5)(3x - 5)$   
 C.  $2(3x - 5)$       D. *prime*

18. Factor  $5x^2 + 30x - 40$ .  $5(x^2 + 6x - 8)$
- A.  $5(x + 4)(x - 2)$       B.  $5(x - 4)(x + 2)$   
 C.  $5(x^2 + 6x - 8)$       D. *prime*

19. Factor  $6x^2 - 22x + 16$ .  $2(3x^2 - 11x + 8)$
- A.  $2(3x + 1)(x - 4)$       B.  $(2x - 4)(3x + 1)$   
 C.  $2(3x - 1)(x + 4)$       D. *prime*
- $\frac{3x^2}{-3x} \quad \frac{3x^2}{-8x}$        $\frac{24}{+3} \quad -8$

20. Factor  $x^2 + 12x + 32$ .
- A.  $(x - 8)(x - 4)$       B.  $(x + 8)(x + 4)$   
 C.  $(x - 8)(x + 4)$       D. *prime*

21. Factor  $4x^2 - 4x - 15$ .  $\frac{4x^2}{6x} \quad \frac{4x^2}{-10x}$
- A.  $(2x + 3)(2x - 5)$       B.  $(2x - 3)(2x - 5)$   
 C.  $(2x - 3)(2x + 5)$       D. *prime*
- $\frac{60}{+6} \quad -10$

22. Factor  $6x^2 - 12x - 5x + 10$ .  $6x(x-2) - 5(x-2)$
- A.  $(6x - 5)(x - 2)$       B.  $(6x + 5)(x - 2)$   
 C.  $6(x - 5)(x - 2)$       D. *prime*

23. Factor  $2x^2 + 20x + 48$ .  $2(x^2 + 10x + 24)$
- A.  $2(x - 6)(x + 4)$       B.  $2(x + 6)(x + 4)$   
 C.  $2(x + 12)(x - 2)$       D.  $2(x + 12)(x + 2)$

24. Factor  $x^2 - 8x - 20$ .
- A.  $(x + 2)(x - 10)$       B.  $(x + 2)(x + 10)$   
 C.  $(x - 2)(x + 10)$       D.  $(x - 2)(x - 10)$

25. Factor  $3x^2 - 18x + 27$ .  $3(x^2 - 6x + 9)$
- A.  $3(x - 3)(x + 3)$       B.  $3(x - 3)(x - 3)$   
 C.  $3(x + 3)^2$       D.  $3(x - 3)^2$

17. \_\_\_\_\_  
 18. \_\_\_\_\_  
 19. \_\_\_\_\_  
 20. \_\_\_\_\_  
 21. \_\_\_\_\_  
 22. \_\_\_\_\_  
 23. \_\_\_\_\_  
 24. \_\_\_\_\_  
 25. \_\_\_\_\_

Points(27) \_\_\_\_\_

26. Solve  $x^2 - 9x + 18 = 0$   $(x-3)(x-6)$   
 A. 3, 6    B. -3, -6    C. -3, 6    D. 3, -6

27. Solve  $x^2 - 36 = 0$   $(x+6)(x-6)$   
 A. 6    B. -6    C. -6, 6    D. -12

28. Solve  $x^2 + 14x + 49 = 0$   $(x+7)(x+7) = 0$   
 A. 7    B. -7    C. -7, 7    D. -14

29. Solve  $2x^2 - 7x = 15$   $2x^2 - 7x - 15 = 0$   
 A.  $-\frac{3}{2}, -5$     B.  $-\frac{3}{2}, 5$     C.  $\frac{3}{2}, -5$     D.  $\frac{3}{2}, 5$   
 $\frac{2x^2}{3x} \quad \frac{2x^2}{-10x} \quad \frac{30}{+3-10}$

30. Solve  $2x^2 + 4x - 16 = 0$   $2(x^2 + 2x - 8)$   $2(x+4)(x-2)$   
 A. 0, -4, 2    B. -2, 4    C. 0, -2, 4    D. 2, -4  
 $2 \neq 0 \quad x+4=0 \quad x-2=0$

31. Solve  $2x^2 - 12x = 0$   $2x(x-6) = 0$   $2x=0 \quad x-6=0$   
 A. 6    B. -6    C. 0, 6    D. 0, -6

32. Solve  $x^2 + 8x = 20$   $x^2 + 8x - 20 = 0$   $(x+10)(x-2)$   
 A. 0, 10, -2    B. 0, -10, 2    C. -10, 2    D. 10, -2

33. Solve  $4x^2 + 8x = 5$   $4x^2 + 8x - 5 = 0$   $\frac{4x^2}{10x} \quad \frac{4x^2}{-2x}$   $\frac{20}{+1-2}$   
 A.  $-\frac{5}{2}, \frac{1}{2}$     B.  $\frac{5}{2}, -\frac{1}{2}$     C.  $-\frac{5}{2}, -\frac{1}{2}$     D.  $\frac{5}{2}, \frac{1}{2}$

$(2x+5)(2x-1) = 0$   
 $2x+5=0 \quad 2x-1=0$

26. \_\_\_\_\_

27. \_\_\_\_\_

28. \_\_\_\_\_

29. \_\_\_\_\_

30. \_\_\_\_\_

31. \_\_\_\_\_

32. \_\_\_\_\_

33. \_\_\_\_\_

Points(24) \_\_\_\_\_